

Application No. 09/197278
Page 2

Amendment
Attorney Docket No. S63.2B-6769-US01

Amendments To The Claims:

1-38 (Canceled)

39.(Previously presented) A stent with a proximal end, a distal end and a longitudinal axis, the stent comprising:

a plurality of undulating band-like elements having a plurality of turns forming alternating peaks and troughs, each undulating band-like element extending about the longitudinal axis, the plurality of undulating band-like elements extending from the proximal end of the stent to the distal end of the stent, adjacent undulating band-like elements separated by gaps which are shorter in longitudinal length than the undulating band-like elements,

the plurality of undulating band-like elements including a first undulating band-like element, a second undulating band-like element and a third undulating band-like element, the second undulating band-like element disposed between the first and third undulating band-like elements, and

a plurality of substantially linear interconnecting elements extending between undulating band-like elements which are adjacent one another, each interconnecting element having a first end and a second end which is offset circumferentially and longitudinally along the stent from the first end, interconnecting elements which are circumferentially adjacent one another separated by a plurality of turns along each of the undulating band-like elements which they connect,

the plurality of interconnecting elements including first interconnecting elements and second interconnecting elements,

the first interconnecting elements extending between peaks on the first undulating band-like element and troughs on the second undulating band-like element, the number of peaks on the first undulating band-like element exceeding the number of first interconnecting elements, the second interconnecting elements extending between peaks on the second undulating band-like element and troughs on the third undulating band-like element, the number of peaks on the second undulating band-like element exceeding the number of second interconnecting elements,

wherein the number of peaks of the first undulating band-like element separating circumferentially adjacent first interconnecting elements is less than the number of peaks of the second undulating band-like element separating circumferentially adjacent second interconnecting elements.

Application No. 09/197278
Page 3

Amendment
Attorney Docket No. S63.2B-6769-US01

40.(Previously presented) A stent with a proximal end, a distal end and a longitudinal axis, the stent comprising:

a plurality of undulating band-like elements having alternating peaks and troughs, each undulating band-like element extending about the longitudinal axis, the plurality of undulating band-like elements extending from the proximal end of the stent to the distal end of the stent, adjacent undulating band-like elements separated by gaps which are shorter in longitudinal length than the undulating band-like elements,

the plurality of undulating band-like elements including a first undulating band-like element, a second undulating band-like element, a third undulating band-like element, and a fourth band-like element, the second undulating band-like element disposed between the first and third undulating band-like elements, the third undulating band-like element disposed between the second and fourth undulating band-like elements, and

a plurality of interconnecting elements extending between undulating band-like elements which are adjacent one another, each interconnecting element having a first end and a second end which is offset circumferentially and longitudinally along the stent from the first end,

the plurality of interconnecting elements including first interconnecting elements, second interconnecting elements, and third interconnecting elements,

the first interconnecting elements extending between peaks on the first undulating band-like element and troughs on the second undulating band-like element, the number of peaks on the first undulating band-like element exceeding the number of first interconnecting elements, the second interconnecting elements extending between peaks on the second undulating band-like element and troughs on the third undulating band-like element, the number of peaks on the second undulating band-like element exceeding the number of second interconnecting elements, the third interconnecting elements extending between peaks on the third undulating band-like element and troughs on the fourth undulating band-like element,

the number of peaks of the first undulating band-like element separating circumferentially adjacent first interconnecting elements being less than the number of peaks of the second undulating band-like element separating circumferentially adjacent second interconnecting elements

Application No. 09/197278
Page 4

Amendment
Attorney Docket No. S63.2B-6769-US01

wherein each second interconnecting element is separated from the third interconnecting element nearest to it by a single peak of the third undulating band-like element and a single trough of the third undulating band-like element.

41.(Previously presented) The stent of claim 40 where one third interconnecting element extends from every third peak of the third undulating band-like element.

42.(Canceled)

43. (Previously presented) The stent of claim 40 where the interconnecting elements are substantially linear.

44. (Previously presented) The stent of claim 41 where the interconnecting elements are substantially linear.

45.(Previously presented) The stent of claim 40 wherein the first undulating band-like element is characterized by a first amplitude and the second undulating band-like element is characterized by a second amplitude, the first amplitude greater than the second amplitude.

46.(Previously presented) A stent with a longitudinal axis, the stent comprising:

a plurality of undulating band-like elements having alternating peaks and troughs, each undulating band-like element extending about the longitudinal axis, the plurality of undulating band-like elements including a proximal undulating band-like element of a single first wavelength and single first amplitude having alternating peaks and troughs, an intermediate undulating band-like element of a single second wavelength and single second amplitude having alternating peaks and troughs, and a distal undulating band-like element of the first wavelength and first amplitude having alternating peaks and troughs, the intermediate undulating band-like element disposed between the proximal and distal undulating band-like elements, and

a plurality of interconnecting elements extending between undulating band-like elements which are adjacent one another, each interconnecting element having a first end and a second end which is offset circumferentially and longitudinally along the stent from the first end,

the plurality of interconnecting elements including first interconnecting elements and second interconnecting elements,

the first interconnecting elements extending between peaks on the proximal undulating band-like element and troughs on the intermediate undulating band-like element,

Application No. 09/197278
Page 5

Amendment
Attorney Docket No. S63.2B-6769-US01

the second interconnecting elements extending between peaks on the intermediate undulating band-like element and troughs on the distal undulating band-like element,

wherein the first ends of the first interconnecting elements extend from every third peak of the proximal undulating band-like element and the second ends of the second interconnecting elements extend from every third trough of the distal undulating band-like element.

47.(Previously presented) The stent of claim 46 wherein the plurality of undulating band-like elements further comprises a second distal undulating band-like element having alternating peaks and troughs, the second distal undulating band-like element distal to the distal undulating band-like element,

the plurality of interconnecting elements including third interconnecting elements extending between peaks on the distal undulating band-like element and troughs on the second distal undulating band-like element,

wherein each second interconnecting element is separated from the third interconnecting element nearest to it by a single peak and a single trough of the distal undulating band-like element.

48.(Previously presented) The stent of claim 47 wherein the interconnecting elements are linear.

49.(Previously presented) The stent of claim 48 wherein the first amplitude is greater than the second amplitude, and the first wavelength is greater than the second wavelength.

50.(Previously presented) A stent with a longitudinal axis, the stent comprising:

a plurality of undulating band-like elements having alternating peaks and troughs, each undulating band-like element extending about the longitudinal axis, undulating band-like elements which are adjacent one another separated by a gap which is shorter in longitudinal length than each of the adjacent undulating band-like elements, the plurality of undulating band-like elements including a first undulating band-like element and a second undulating band-like element, the first and second undulating band-like elements adjacent one another, and

a plurality of substantially linear interconnecting elements extending between undulating band-like elements which are adjacent one another, each interconnecting element having a first end and a second end which is offset circumferentially and longitudinally along the stent from the first end, the plurality of interconnecting elements including first interconnecting elements, the

Application No. 09/197278
Page 6

Amendment
Attorney Docket No. S63.2B-6769-US01

first interconnecting elements extending between peaks on the first undulating band-like element and troughs on the second undulating band-like element, there being fewer interconnecting elements extending between the first and second undulating band-like elements than peaks on the first undulating band-like element, first interconnecting elements which are adjacent one another connected to each other via a first path along the undulating first band-like element, the first path having a first length, the first path being the shortest path along the first undulating band-like element which connects adjacent first connecting elements, and via a second path along the undulating second band-like element, the second path having a second length, the second path being the shortest path along the second undulating band-like element which connects adjacent first connecting elements, adjacent first interconnecting elements and the first and second paths which connect them defining one cell,

wherein the first path length is different from the second path length.

51. (Canceled)

52. (Previously presented) The stent of claim 50 wherein the first and second undulating band-like elements are characterized by different amplitudes.

53. (Previously presented) The stent of claim 50 wherein the first path length is longer than the second path length.

54. (Currently amended) A stent having a plurality of cells, the stent comprising:

a plurality of undulating band-like elements having alternating peaks and troughs, the plurality of undulating band-like elements including a first undulating band-like element, a second undulating band-like element and a third undulating band-like element, the first, second and third undulating band-like elements disposed sequentially along the length of the stent, and

a plurality of substantially linear interconnecting elements extending between undulating band-like elements which are adjacent one another, each interconnecting element having a first end and a second end which is offset circumferentially and longitudinally along the stent from the first end, the interconnecting elements shorter in length than the undulating band-like elements which they connect,

the plurality of interconnecting elements including first interconnecting elements extending between peaks on the first undulating band-like element and troughs on the second undulating band-like element and second interconnecting elements extending between peaks on

Application No. 09/197278
Page 7

Amendment
Attorney Docket No. S63.2B-6769-US01

the second undulating band-like element and troughs on the third undulating band-like element, first interconnecting elements which are adjacent one another connected to each other via a first path along the first undulating band-like element, the first path spanning a plurality of peaks and troughs and being the shortest path along the first undulating band-like element between adjacent first interconnecting elements, second interconnecting elements which are adjacent one another connected to each other via a second path along the second undulating band-like element, the second path having a second length, the second path spanning a plurality of peaks and troughs and being the shortest path along the second undulating band-like element between adjacent second interconnecting elements, the first path length different from the second path length,

wherein each of the cells between the first and third undulating band-like elements is bounded by two interconnecting elements, a portion of the second undulating band-like element and a portion of either the first or the third undulating band-like element.

55.(Canceled)

56.(Previously presented) The stent of claim 54 wherein the first and second undulating band-like elements are characterized by different amplitudes.

57.(Previously presented) The stent of claim 54 wherein the first path length is longer than the second path length.

58.(Previously presented) The stent of claim 46 wherein the first amplitude is equal to the second amplitude and the first wavelength is equal to the second wavelength.

59.(Currently amended) A stent extending about a longitudinal axis, the stent comprising a plurality of interconnected alternating first and second serpentine circumferential bands,

each of the first serpentine circumferential bands which alternate with the second serpentine circumferential bands having a first number of turns, the turns offset in a circumferential direction from one another, each of the second serpentine circumferential bands characterized by a second number of turns, the turns offset in a circumferential direction from one another, the first number of turns exceeding the second number of turns, the length of the first bands as measured in a longitudinal direction exceeding the length of the second bands as measured in a longitudinal direction,

the first and second serpentine circumferential bands arranged such that one second serpentine circumferential band is provided between every two successive first serpentine bands

Application No. 09/197278
Page 8

Amendment
Attorney Docket No. S63.2B-6769-US01

and connected thereto, and one first serpentine circumferential band is provided between every two successive second serpentine bands and connected thereto,

the interconnected alternating first and second serpentine circumferential bands defining a plurality of cells each of which is bounded at one end by an end wall comprising a plurality of turns of a first serpentine circumferential band and at another end by another end wall comprising a plurality of turns of a second serpentine circumferential band, each of said cells which are defined by the interconnected first and second serpentine circumferential bands at least partially abutting another such cell and having a portion of an end wall in common with the such cell,

each end wall of a cell having a connected turn which is connected to another longitudinally adjacent end wall and a plurality of unconnected turns, the unconnected turns not being connected to the longitudinally adjacent end wall.

60.(Previously presented) The stent of claim 54 wherein the peaks and troughs are bulbous.

61.(Previously presented) The stent of claim 54 wherein fewer than three interconnecting elements extend between adjacent undulating band-like elements.